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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/618,622	07/18/2000	I-Teh Sha	0325.00377	9310

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EXAMINER

CORRIELUS, JEAN B

ART UNIT	PAPER NUMBER
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2631

DATE MAILED: 02/23/2004

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/618,622

Applicant(s)

SHA ET AL.

Examiner

Jean B Corrielus

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 5-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 5-14 is/are rejected.
- 7) ☒ Claim(s) 15-20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

Allowable Subject Matter

1. The indicated allowableness of claims 4-7, and 14 is withdrawn in view of the previously applied reference(s) to applicant's admitted prior art and Kindinger et al and new reference to Le Febre US patent No. 3,689,754. Rejections based on the applied and new reference(s) follow.

Claim Objections

2. Claims 15-20 are objected to because of the following informalities: claim 15 recites a series of steps A-1 - A-4, however, there is no connection between any of the recited steps. Claims 16-20 are likewise objected to because of their dependency to objected claim 15. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 5-12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's prior art fig. 1 in view of Kindinger et al US Patent No. 4,609,884 and further in view of Le Febre Us patent No. 3,689,754.

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As per claims 1 and 14, Applicant's admitted prior art fig. 1 an apparatus having a circuit for generating a spread spectrum clock signal See fig. 1 and a vco 18. However, applicant's admitted prior art does not teach that the VCO has an automatically controlled gain and that it also fails to teach that the gain of the VCO varies in response to a frequency of said spread spectrum clock signal and a function curve for said linear gain is generated by a predetermined criteria. However, as evidence by Kindinger et al at col. 1, lines 22-59, it is well known in the art for a VCO to include automatically controlled gain. Given that fact, it would have been obvious to one skill in the art at the time of the invention to include such a teaching in applicant's admitted prior art fig. 1 so as set the minimum steering line voltage greater than the peak RF voltage level to prevent recertification as taught by Kindinger et al see col. 1, lines 45-48. Note that, by substituting the regular VCO by a VCO having gain control capability, Kindinger et al completes applicant's admitted prior art. As shown in the figure (fig. 1 of applicant's admitted prior art) the clock signal is fed back and would be used to control the gain of the AGC of the VCO 26. And the reason to use the clock frequency of the ss clock signal to control the gain of the VCO would have been the same as the one provided above. Furthermore, Le Febre teaches the further limitations of generating a function curve for said linear gain by a predetermined criteria see fig. 2 and col. 6, lines 60-63. Given that fact, It would have been obvious to one skill in the art at the time of the invention to incorporate such a teaching in applicant's admitted prior art and Kindinger et al in order to prevent the gain from changing rapidly as taught by Le Febre see col. 5, lines 6-7.

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As per claims 5 and 6, it would have been obvious to one skill in the art to a parabolic curve or a second degree or higher polynomial as the function curve. The reasons to do would have been the same as provided in reference to claim 1.

As per claim 7, generating a function curve using a computer is old and well established in the art. Given that, it would have been obvious to one skill in the art at the time of the invention to generate a function curve using such a device in order to enhance the reliability of the system.

As per claim 8 it would have been obvious to one skill in the art to generate the clock signal in response to a reference signal having a frequency from 50 -1570 MHZ in order to satisfy specific system design requirements.

As per claim 9, Applicant's prior art fig. 1 teaches the use of a single set of ROM codes 24.

As per claim 10, Applicant's prior art fig. 1 teaches that said ROM codes determine a frequency modulation profile for said ss clock.

As per claim 11 said circuit includes a divider 20.

As per claim 12, Applicant's prior art fig. 1 teaches that said ROM control said divider 20.

5. Claim 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's prior art fig. 1 in view of Kindinger et al US Patent No. 4,609,884.

As per claim 1, Applicant's admitted prior art fig. 1 an apparatus having a VCO 18 for generating a spread spectrum clock signal, See fig. 1, in response to

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a control signal VIN; a control circuit (12, 14, 16, 20, 22 and 24) configured to generate said control signal VIN in a response to a reference signal REF said spread spectrum clock signal and a set of Rom codes see fig. 1. However, applicant's admitted prior art does not teach that the VCO has a non linear gain that is automatically controlled and varied in response a frequency of said spread spectrum clock signal. However, as evidence by Kindinger et al at col. 1, lines 22-59, it is well known in the art for a VCO to include automatically controlled gain. Given that fact, it would have been obvious to one skill in the art at the time of the invention to include such a teaching in applicant's admitted prior art fig. 1 so as set the minimum steering line voltage greater than the peak RF voltage level to prevent recertification as taught by Kindinger et al see col. 1, lines 45-48. Note that, by substituting the regular VCO by a VCO having gain control capability, Kindinger et al completes applicant's admitted prior art. As shown in the figure (fig. 1 of applicant's admitted prior art) the clock signal is fed back and would be used to control the gain of the AGC of the VCO 26. And the reason to use the clock frequency of the ss clock signal to control the gain of the VCO would have been the same as the one provided above.

Allowable Subject Matter

6. Claims 15-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. **Any response to this action should be mailed to:**

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Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314

(for informal or draft communications, please label

"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II,
2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier
communications from the examiner should be directed to Jean B.
Corrielus whose telephone number is (703) 305-4023. The
examiner can normally be reached on Monday-Thursday from 7:00
A.M. to 5:30 P.M.

Any inquiry of a general nature or relating to the status of this application
or proceeding should be directed to the Group receptionist whose telephone
number is (703) 305-3800.


Jean B. Corrielus

Primary Examiner

TC-2600

2/19/04